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AMERICAN CYANAMID COMPANY
NELSON COUNTY, PINEY RIVER, VIRGINIA 22964
AREA CODE 703 277-5211

October 31, 1972

Mr. D. C. Praeger
Central Regional Office
Virginia State Water Control Board
P. O. Box 4201 Fort Hill Station
Lynchburg, Virginia 24502

Dear Mr. Praeger:

As requested in our meeting with you on October 3, 1972, we are submitting herewith our plan for abatement of pollution of the Piney River due to run-off and seepage from our stockpile of ferrous sulfate (copperas).

Details of our proposal, including proposed procedures for moving and placing the pile at a new location are set forth in the attached documents entitled, "Proposed Pollution Abatement Program, Piney River Plant" and Drawing SD-1-D.

We trust your office and the Water Control Board will act favorably upon this proposal.

If you require any additional information, please do not hesitate to call on us.

Very truly yours,

J. F. Hopkins
Plant Manager

GA/mf

attachments

RECEIVED
NOV 2 1972
STATE WATER CONTROL BOARD
Central Regional Office

PLAINTIFF'S EXHIBIT 36

Original Sent to Richmond on 11-2-72

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PROPOSED POLLUTION ABATEMENT PROGRAM

PINEY RIVER PLANT

SUMMARY

American Cyanamid Company proposes to abate its pollution of the Piney River by emplacement of the existing waste copperas pile at a site remote from the river and groundwaters. The selected site is composed of native red clay and underlain with igneous rock. The buried material will be covered with red clay and graded to minimize seepage through the copperas. All rainfall on the burial site will be impounded to prevent overflow to surface water.

Implementation of the proposed plan will eliminate discharge of iron and acid contaminated runoff from the present waste copperas pile into the Piney River. As a result, depressed pH conditions in the Piney, Tye and Buffalo Rivers will be improved.

It is estimated that removal and placement of the copperas pile will be completed in 6 to 8 months (depending on weather conditions) after approval to proceed is granted by the State Water Control Board.

BACKGROUND

Since manufacturing operations were closed down at American Cyanamid Company's Piney River Plant in June, 1971 the principal source of pollution to the Piney River has been seepage and runoff from the waste copperas pile. This material had been stockpiled over a period of more than twenty years in a small valley on the north side of the Piney River (see attached Drawing SD-1-D). Precipitation which falls on the pile and the surrounding land surface eventually reaches the river as surface runoff, as well as groundwater.

In order to minimize the flow of surface runoff from the surrounding land surface through the copperas pile, drainage ditches have been constructed around its periphery. At the present time only precipitation falling directly on the pile reaches the river. A dam near the southerly end of the copperas pile forms an impoundment which equalizes runoff to the river.

PROPOSED SOLUTION

In order to eliminate pollution of the Piney River due to copperas pile runoff, American Cyanamid proposes to move the pile from its present location to a dry mine tailings impoundment on the south side of the Piney River, as shown on the attached drawing.

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The new site is at an elevation approximately 150 feet above the river, and well above the top of the zone of saturation. The detrital in the tailings pond and the surrounding native soil is composed of predominantly clayey materials. The underlying bedrock is an igneous complex with low permeability and transmissivity characteristics. This site was recommended by Geraghty & Miller, Inc., consulting groundwater geologists, after investigation and evaluation of several sites as potential relocation areas for the copperas pile.

PLACEMENT OF COPPERAS AT NEW SITE

The copperas will be hauled to the mine tailings area and deposited over approximately 10 acres, as shown on the attached drawing. Copperas will be sloped from a depth of about 10 feet to 6 feet, with an average depth of 8 feet. It will be contained by using the natural red clay of the existing hillside on two sides and a dike on the other two sides built of the clayey mine tailings. The top of the copperas will be covered, again using natural red clay from the adjacent hillside, to a depth of approximately 3 feet. The top cover will be compacted and sloped (1.5 feet per 100 feet) in order to increase runoff of rainfall and minimize seepage through the copperas.

Drainage ditches will be provided around the tailings pond to divert surface runoff away from this area. Rainfall on the copperas area will be contained within the 40 acre tailings pond, which is enclosed by a natural red clay hillside and a red clay dike. The storage volume remaining after placement of the copperas will be about 160 acre feet. Since the annual rainfall (less than 48 inches) and evaporation in this area are approximately equal, there will be no overflow of liquid from the tailings pond to contaminate surface waters. The nature of the underlying clay and rock formations will prevent contamination of groundwater.

All natural ground which has been disturbed during the copperas placement will be seeded in accordance with State specifications for mined land reclamation.

REMOVAL OF EXISTING COPPERAS PILE

Copperas will be loaded on trucks by a front-end-loader and moved through Cyanamid property on in-plant roads, a distance of slightly more than one mile.

The contractor will be required to exercise care and diligence to prevent spills of solid copperas and will be required to clean-up daily any spills which may inadvertently occur. Because of the nature of the copperas there should be no dust problem, nor should there be any likelihood of spills if trucks are properly loaded.

The contractor will also be required to maintain the existing surface drainage diversion ditches around the copperas pile, or alter them as necessary, during the removal period. In addition, the contractor will be required to maintain the existing impounding basin, to prevent solid material from being flushed into the river.

Upon completion of the copperas removal the area will be cleaned-up to the original ground level. The area will then be seeded in accordance with State specifications for mined land reclamation.

GA/mf
10/31/72